Vol. 50 1977

Histochemistry

Editors

P. B. Diezel, Pforzheim

P. van Duijn, Leiden

O. Eränkö, Helsinki

P. Gedigk, Bonn

W. Gössner, München

W. Graumann, Tübingen

J. S. Hugon, Sherbrooke

G. P. Kozlowski, Fort Collins

Z. Lojda, Praha

B. Maurer-Schultze, Würzburg

A. E. F. H. Meijer, Amsterdam

H. A. Padykula, Wellesley

A. G. E. Pearse, London

D. Pette, Konstanz

W. Sandritter, Freiburg

T. H. Schiebler, Würzburg

A. M. Seligman, Baltimore†

M. Wolman, Tel-Hashomer



Springer-Verlag Berlin Heidelberg New York

Histochemistry

Founded in 1958. Volumes 1–3 were titled "Zeitschrift für Zellforschung und mikroskopische Anatomie," with the subtitle "Abteilung Histochemie." Beginning with Volume 4 the title was changed to "Histochemie/Histochemistry/Histochimie." From Volume 38 the journal is called "Histochemistry."

The exclusive copyright for all languages and countries, including the right for photomechanical and any other reproductions, also in microform, is transferred to the publisher.

The use of registered names, trademarks etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Alle Rechte, einschließlich das der Übersetzung in fremde Sprachen und das der fotomechanischen Wiedergabe oder einer sonstigen Vervielfältigung, auch in Mikroform, vorbehalten. Jedoch wird gewerblichen Unternehmen für den innerbetrieblichen Gebrauch nach Maßgabe des zwischen dem Börsenverein des Deutschen Buchhandels e.V. und dem Bundesverband der Deutschen Industrie abgeschlossenen Rahmenabkommens die Anfertigung einer fotomechanischen Vervielfältigung gestattet. Wenn für diese Zeitschrift kein Pauschalabkommen mit dem Verlag vereinbart worden ist, ist eine Wertmarke im Betrage von DM 0,40 pro Seite zu verwenden. Der Verlag läßt diese Beträge den Autorewerbänden zusließen.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in dieser Zeitschrift berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, daß solche Namen im Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Springer-Verlag Berlin · Heidelberg · New York

Printed in Germany by Universitätsdruckerei H. Stürtz AG, Würzburg

© by Springer-Verlag Berlin · Heidelberg 1977

Contents

Adminets, J., S. Sundier, F., et al.	33
Bácsy, E., Tougard, C., Tixier-Vidal, A., Marton, J., Stark, E.: Corticotroph Cells in Primary	
Cultures of Rat Adenohypophysis: A Light and Electron Microscopic Immunocytochemical	
Study	161
Berchtold, JP.: Ultracytochemical Demonstration and Probable Localization of 3β-Hydroxy-	101
steroid Dehydrogenase Activity with a Ferricyanide Technique	175
Böck, P., s. Gorgas, K.	173
Böcking, A., Großarth, C., Deimling, O. von: Esterase XXIII: Electron Microscopical Demon-	1/
stration of Non-Specific Esterases in the Jejunum of the Mouse (Mus. musc.) with two	
Quinoline Derivates	65
Boeken, G., s. Oostveldt, P. van	147
Bosch, N. v. d., s. Driessen, O.M.J., et al.	77
Boyde, A., Reith, E.J.: Qualitative Electron Probe Analysis Secretory Ameloblasts and Odonto-	
blasts in the Rat Incisor	347
Brzin, M., s. Klinar, B.	313
Buffa, R., Capella, C., Solcia, E., Frigerio, B., Said, S.I.: Vasoactive Intestinal Peptide (VIP)	
Cells in the Pancreas and Gastro-Intestinal Mucosa. An Immunohistochemical and Ultra-	
structural Study	217
Capella, C., s. Buffa, R., et al.	217
Ceurremans, S., s. Gröschel-Stewart, U., et al.	271
Chance, R.E., s. Forssmann, W.G., et al.	281
Coulton, L.A.: Temporal Relationship Between Glucose 6-phosphate Dehydrogenase Activity	201
and DNA-Synthesis	207
Deimling, O. von, s. Böcking, A., et al.	65
Driessen, O.M.J., Thesingh, C.W., Bosch, N.v.d.: Autoradiographic Model Experiments with	
⁶⁷ Ga and ^{99m} Tc	77
Ellison, J.P., s. Watson, S.J., Jr	119
Fisher, O.T., s. Troyer, H., et al.	251
Forssmann, W.G., Helmstaedter, V., Metz, J., Greenberg, J., Chance, R.E.: The Identification	
of the F-Cell in the Dog Pancreas as the Pancreatic Polypeptide Producing Cell	281
Fraschini, A., Marinozzi, V.: Critical Analysis of the Use of the Acrolein-Schiff Method	
as a Possible DNA Reaction	197
Frigerio, B., s. Buffa, R., et al.	217
Geyer, G., s. Makovitzky, J.	261
Goldenberg, H., s. Pavelka, M., et al.	47
Gorgas, K., Böck, P.: Morphology and Histochemistry of the Adrenal Medulla. I. Various	
Types of Primary Catecholamine-Storing Cells in the Mouse Adrenal Medulla	17
Greenberg, J., s. Forssmann, W.G., et al	281
Gröschel-Stewart, U., Ceurremans, S., Lehr, I., Mahlmeister, C., Paar, E.: Production of	201
Groschel-Stewart, U., Centremans, S., Lein, I., Mannicister, C., Taar, E., Trouction of	
Specific Antibodies to Contractile Proteins, and Their Use in Immunofluorescence Micro-	
scopy. II. Species-Specific and Species-Non-Specific Antibodies to Smooth and Striated	271
Chicken Muscle Actin	271
Großarth, C., s. Böcking, A., et al.	65

Hakanson, R., s. Sundler, F., et al	3, 39
Cells	319
Helmstaedter, V., s. Forssmann, W.G., et al.	281
Hervonen, H., s. Rechardt, L.	57
Hirata, K., s. Nada, O.	111
Holst, J., s. Sundler, F., et al.	33
Hornung, G., s. Silbermann, M., et al.	327
	47
Hüttinger, M., s. Pavelka, M., et al.	327
Kadar, T., s. Silbermann, M., et al.	319
Kasper, M., s. Heitz, Ph., et al	9
Khan, M.A.: Histochemical Sub-Types of Three Fibre-Types of Avian Skeletal Muscle Khan, M.A.: On the Subsarcolemmal Localization of Phenazine Ethosulfate-Linked α-Glycero-	9
phosphate Dehydrogenase Activity in Pigeon Pectoralis White Muscle Fibres	103
Klinar, B., Brzin, M.: A Comparison Between the One-Step and the Two-Step Copper Thiocho-	
line Procedure for the Cytochemical Localization of Cholinesterases	313
Kopečný, V., Pech, V.: An Autoradiographic Study of Macromolecular Syntheses in the	
Epithelium of the Ductus Epididymidis in the Mouse. II. Incorporation of L-Fucose-1-3H	229
Kramar, R., s. Pavelka, M., et al	47
Kyösola, K.: Cholinesterases of the Gall Bladder	337
Larsson, LI., s. Sundler, F., et al	3, 39
Lehr, I., s. Gröschel-Stewart, U., et al	271
Lindvall, O.: Combined Visualization of Central Catecholamine- and Acetylcholinesterase-	
containing Neurons: Application of the Glyoxylic Acid and Thiocholine Histochemical	
Methods to the same Vibratome Section	191
Mahlmeister, C., s. Gröschel-Stewart, U., et al	271
Makovitzky, J., Geyer, G.: Untersuchungen über die anisotrope Toluidinblaufärbung der	
Glykokalyx (Investigations on the Glycocalyx with Toluidin Blue Staining)	261
Marinozzi, V., s. Fraschini, A.	197
Marton, J., s. Bácsy, E., et al	161
Meijer, A.E.F.H., s. Vries, G.P. de	1
Metz, J., s. Forssmann, W.G., et al	281
Mörnstad, H.: Adenosine Triphosphate Catabolism in Homogenates of Rat Secretory Enamel	
Organs Incubated in Histochemical Lead Media	301
Nada, O., Hirata, K.: Pharmaco-Histochemical Studies on a Specific Monoamine in the	
Gustatory Epithelia of the Rabbit	111
Ohyumi, M., Takano, S.: Intranuclear Synthesized and Native Glycogen Particles in Human	
Gastric Cancer: Ultrastructure and Histochemistry	239
Oostveldt, P. van, Boeken, G.: Absorption Cytophotometry: Evaluation of Three Methods	
for the Determination of DNA in Feulgen Stained Nuclei	147
Paar, E., s. Gröschel-Stewart, U., et al.	271
Pavelka, M., Goldenberg, H., Hüttinger, M., Kramar, R.: Enzymic and Morphological Studies on Catalase Positive Particles from Brown Fat of Cold Adapted Rats	47
Pearse, A.G.E., s. Heitz, Ph., et al.	319
Pech, V., s. Kopečný, V.	229
Polak, J.M., s. Heitz, Ph., et al.	
Rechardt, L., Hervonen, H.: Electron Microscopic Localization of Adenylate Cyclase Activity	319
of White and Brown Adipose Tissue of the Rat and Chicken	
Reith, E.J., s. Boyde, A.	57
Rix, E., Schiller, A., Taugner, R.: Freeze-Fracture-Autoradiography	347
Rosenquist Th H s Trover H et al	91
Rosenquist, Th.H., s. Troyer, H., et al	251
stration of Soluble Engages	0.1
stration of Soluble Enzymes	81
Schiller A c Div F et al	217
Scholte H.R. s. Ruitenback W.	91
Scholte, H.R., s. Ruitenbeek, W.	81

Contents

ilbermann, M., Kadar, T., Hornung, G.: Corticosteroid-Induced Changes in Glucose Metabo-	
lism of Chondrocytes	327
olcia, E., s. Buffa, R., et al	217
tanford, C.: Semi-Quantitative Estimation of Changes in Noradrenaline Content and Intra-	
neuronal Distribution in the Rat Vas Deferens by Fluorescence Histochemistry	129
tark, E., s. Bácsy, E., et al.	161
lundler, F., Alumets, J., Holst, J., Larsson, LI., Håkanson, R.: Ultrastructural Identification	
of Cells Storing Pancreatic-Type Glucagon in Dog Stomach	33
undler, F., Larsson, LI., Håkanson, R.: Fluorescense Histochemistry of Peptide Hormone-	
Producing Cells: Observations on the Nitroso-Naphthol Method for the Demonstration	
of Tyrosine Residues	39
Takano, S., s. Ohyumi, M	239
laugner, R., s. Rix, E., et al	91
Pervo, T.: Consecutive Demonstration of Nerves Containing Catecholamine and Acetylcho-	
linesterase in the Rat Cornea	291
Thesingh, C.W., s. Driessen, O.M.J., et al.	77
imson, C.M., s. Heitz, Ph., et al	319
lixier-Vidal, A., s. Bácsy, E., et al.	161
Tougard, C., s. Bácsy, et al.	161
royer, H., Fisher, O.T., Rosenquist, Th.H.: Bone Alkaline Phosphatase Kinetics Studied	
by a New Method	251
/ries, G.P. de, Meijer, A.E.F.H.: Semipermeable Membranes for Improving the Histochemical	
Demonstration of Enzyme Activities in Tissue Sections. VI. D-Glucose 6-phosphate Isomer-	
ase and Phosphoglucomutase	1
Watson, S.J., Jr., Ellison, J.P.: Cryostat Technique for Central Nervous System Histo-	
fluorescence	119

ndexed in Current Contents



Notes on Preparation of Illustrations

election of illustration material: In order to obtain the best results in reproduction, avoid delays during production and hence unnecessary costs, we ask authors to note the following points when selecting and preparing illustration copy.

- . Half-tones (photographs, photomicrographs, X-rays, instrument traces etc.)
 - Send only good, well-contrasted glossy prints of the original negative; prints should be trimmed at right angles; send contact copies of X-rays if these are not available, the actual X-ray films.
 - Mark or trim off marginal portions which are not required (at right angles, please).
 - State scale of reduction, if any, with due allowance for the format of the printed page (print area).
 - Group figures into whole-page plates; see that they match in the proposed scale of reduction.
 - With X-rays, in particular, mark the significant portions on the back of the copy, or on a cover sheet.
 - Enter inscriptions, marker lines etc. neatly and in the appropriate size, either on the photograph itself or on a cover sheet.

Line drawings

- State final size of illustration, with due allowance for print area.
- The ideal is for drawings to be twice the final size and executed in indelible black ink.

Important points to note: thickness of lines, size of inscriptions, size of measuring points, adequate spacing of shaded and dotted areas.

Words should be in upper and lower case characters (not block capitals).

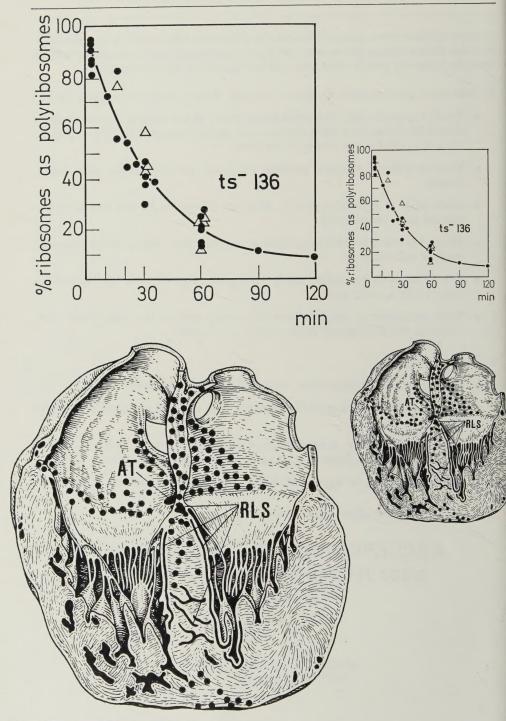
Example showing the effect of reduction $\times \frac{1}{2}$.

ABCDEFGHIJKLMNOPQRSTUVWXYZ aabcdefghijklmnopqrstuvwxyzß 1234567890

(!:::+=-x?%)

ABCDEFGHIJKLMNOPQRSTUVWXYZ aabcdefghijklmnopqrstuvwxyzß 1234567890 (!:;;+=;x?%)

Some more examples see overleaf



Examples showing the effect of reduction \times $^{1}/_{2}$